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TRANSMITTAL FORM (to be used for all correspondence after initial filing)			Application No.	10/560,756	
			Filing Date	December 13, 2005	
			First Named Inventor	Yasuhiro ODA	
			Art Unit	2811	
			Examiner Name	Crane, Sara W.	
Total Number of Pa	ages in This Submission	6	Attorney Docket Number	96790P515	
	ENCLO	SURES (chec	k all that apply)		
Fee Transmittal	Form	Drawing(s)	ı	After Allowance Communication to TC	
Fee Attack	hed	Licensing-re	elated Papers	Appeal Communication to Board of Appeals and Interferences	
Amendment / Re	eply	Petition		Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)	
After Fina Affidavits/	ıl /declaration(s)	Petition to C Provisional		Proprietary Information	
Extension of Tim	ne Request	Power of Attorney, Revocation Change of Correspondence Address  Terminal Disclaimer  Request for Refund		Status Letter  Other Enclosure(s) (please identify below):	
Express Abando	nment Request				
Information Disc	losure Statement			Letter; Form PCT/IPEA/409; postcard	
PTO/SB/08		CD, Number	• •		
Certified Copy o		Landso	cape Table on CD		
Response to Mis Incomplete Appli	cation Filing Fee	Remarks			
	aration/POA				
Response Parts und 1.52 or 1.5	e to Missing er 37 CFR 53				
	SIGNATURI	E OF APPLICAN	IT, ATTORNEY, OR A	GENT	
Firm Eric S. Hyman,		, Reg. No. 30,	139		
Individual name BLAKELY, S		OKOŁOFF,	TAYLOR & ZAF	MAN LLP	
Signature		9/7/	/		
Date			y rolo		
CERTIFICATE OF MAILING/TRANSMISSION					
I hereby certify that this postage as first class m	correspondence is being nail in an envelope addre	g deposited with the ssed to: Commissi	e United States Postal Services oner for Patents, P.O. Box	ice on the date shown below with sufficient 1450, Alexandria, VA 22313-1450.	
Typed or printed na	ame Vi Hoang			1.1	
Signature				Date 3/21/07	

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(異	MAR 2 6 2007	H)
16		<u>"</u>

## FEE TRANSMITTAL for FY 2006

Patent fees are subject to annual revision.

Applicant claims small entity status. See 37 CFR 1.27.

TOTAL AMOUNT OF PAYMENT (\$)

Complete if Known

Application Number 10/560,756

Filing Date December 13, 2005

First Named Inventor Yasuhiro ODA

Examiner Name Crane, Sara W.

Art Unit 2811

Attorney Docket No. 96790P515

METHOD OF PAYMENT (check all that apply)							
Check	☐ Check ☐ Credit card ☐ Money Order ☐ None ☐ Other (please identify):						
Deposit A	Account I	Deposit A	ccount N	Number: 02-2666 Deposit Account Name: Blakely, Sokoloff, Taylor &	Zafman LLP		
For the a	For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)  Charge fee(s) indicated below  Charge any additional fee(s) or underpayment of fee(s)  under 37 CFR §§ 1.16, 1.17, 1.18 and 1.20.						
FEE CALCU	LATION						
Large Er	ntity	Small	Entity				
Fee	Fee	Fee		Fee Description	Eco Doid		
Code	(\$)	Code	(\$)	r ee Description	Fee Paid		
1051	130	2051	65	Surcharge - late filing fee or oath			
1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet.			
2053	130	2053	130		· · · · ·		
1251	120	2251	60	Extension for reply within first month			
1252	450	2252		Extension for reply within second month			
1253	1,020	2253		Extension for reply within third month			
1254	1,590	2254	795	Extension for reply within fourth month			
1255	2,160	2255	1,080	Extension for reply within fifth month			
1401	500	2401	250	Notice of Appeal			
1402	500	2402	250	Filing a brief in support of an appeal			
1403	1,000	2403		Request for oral hearing			
1451	1,510	2451		Petition to institute a public use proceeding			
1460	130	2460		Petitions to the Commissioner			
1807	50	1807		Processing fee under 37 CFR 1.17(q)			
1806	180	1806	180	Submission of Information Disclosure Stmt			
1809	790	1809	395	Filing a submission after final rejection (37 CFR § 1.129(a))			
1810	790	2810		For each additional invention to be examined (37 CFR § 1.129(b))			
Other fe	ا ee (spe	cifv)		(a) (a) (b) (b) (c) (c) (c) (c) (c) (c) (c) (c) (c) (c			
	SUBTOTAL (2) (\$)						
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SUBMITTED BY Complete (if applicable)					
Name (Print/Type)	Eric S. Hyman	Registration No. (Attorney/Agent)	30,139	Telephone	(310) 207-3800
Signature	9		<del></del>	Date	3/200

Based on PTO/SB/17 (12-04) as modified by Blakely, Solokoff, Taylor & Zafman (Air) 12/15/2004. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1859



Atty. Docket No.: 096790.P515

### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re the application of:	)	
Yasuhiro Oda	)	Examiner:
Application No.: 10/560756	)	Art Unit:
Filing Date: December 13, 2005	ý	The Ome.
For: HETEROSTRUCTURE BIPOLAR TR	RANSISTOR )	
Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450		
	<u>LETTER</u>	
Dear Sir:		
Submitted herewith is a copy of Form	n PCT/IPEA/409 (4 pa	ages).
	Respectfully submitte	d,
Date:	Eric S. Hyman Reg.  CERTIFICATE OF I hereby certify that this of deposited with the United first class mail in an envery Commissioner for Patents Alexandria, VA 22313-1  Vi Hoang	MAILING correspondence is being a States Postal Service as elope addressed to: s, P.O. Box 1459,

### PATENT COOPERATION TREATY

# TRANSLATION INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or a	gent's file referei <b>02PCT</b>	nce	FOR FURTHER A	CTION	See Form PCT/IPEA/416	
International ap	•		International filing da		(year) Priority date (day/month/year)	
	2005/011		24.06.200		01.07.2004	
	/331 (200	06.01),	nal classification and l H01L29/737 TELEPHONE	(2006.0		
under 2. This R	Article 35 and tr REPORT consists	ansmitted to the	applicant according to	Article 36.	ed by this International Preliminary Examining Aucluding this cover sheet.	athority
a. 🔀	(sent to the	applicant and t	o the International But	reau) a total of	sheets, as follows:	
	sheets	of the descript	ion, claims and/or drav	vings which ha	ave been amended and are the basis for this report ity (see Rule 70.16 and Section 607 of the Adminis	and/or
b. [	⊢ Lhe di Box.	sclosure in the	international application	on as filed, as	hority considers contain an amendment that goes he indicated in item 4 of Box No. I and the Supple and number of electronic carrier(s))	oeyond :mental
<u></u>	,			·		
	related therete 802 of the Ad	o, in electronic ministrative Ins	form only, as indicate tructions).	d in the Supple	containing a sequence listing and/or lemental Box Relating to Sequence Listing (see S	ection
4. This re	port contains inc	lications relatin	g to the following item	s:	W -	
$\boxtimes$	Box No. I	Basis of the r	eport		,	
	Box No. II	Priority			·	
	Box No. III	Non-establish	nment of opinion with a	egard to novelt	ty, inventive step and industrial applicability	
	Box No. IV	Lack of unity				
$\boxtimes$	Box No. V	Reasoned state	tement under Article 33 explanations supportin	5(2) with regard g such statemen	rd to novelty, inventive step or industrial applicabil ant	ity:
Box No. VI Certain documents cited						
Box No. VII Certain defects in the international application						
Box No. VIII Certain observations on the international application						
Date of submissi	on of the demand	t	1	Date of complet	ction of this report	
Name and mailin	ig address of the	IPF A/IP		Authorized offic		
	<u> </u>	100 001		MINTER OTHE		
Facsimile No.				elephone No.		

### INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/JP2005/011606

Box N	šo. 1		Basis of the report			
l.	With	regard t	to the language, this report is based on:			
	X	the inte	rnational application in the language in which it was	filed		
			islation of the international application into ion furnished for the purposes of:			, which is the language of a
		ir	nternational search (Rule 12.3(a) and 23.1(b))			
		,	ublication of the international application (Rule 12.4	(a))		
		☐ ir	nternational preliminary examination (Rule 55.2(a) a	nd/or 55.3(a))		
,	recei	regard t ving Off report):	o the elements of the international application, this ice in response to an invitation under Article 14 ar	report is based on (replacement s c referred to in this report as "or	heets wh riginally	ich have been furnished to the filed" and are not annexed to
· [		•	. rnational application as originally filed/furnished			
	$\times$		cription:			
		pages	1,3,5-18,22			as originally filed/furnished
		page s*	2, 4, 19-21	received by this Authority on	05.10	
		pages#		· -		
Б	Image: section of the	the clair				
		nos.				
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2	Ľ	the drav	vings:			
		sheets	Fig. 1-16			as originally filed/furnished
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	_	sheets*		received by this Authority on		
		a sequer	nce listing and/or any related table(s) - sec Suppleme	ental Box Relating to Sequence Li	sting.	
3.		The amo	endments have resulted in the cancellation of:			
	[	th	e description, pages			
	[	th	e claims, nos.			
	[	] the	c drawings, sheets/figs			
	[		e sequence listing (specify)			
	[	an	y table(s) related to sequence listing (specify):			
4.		This rep they hav	ort has been established as if (some of) the amenda to been considered to go beyond the disclosure as file	ments annexed to this report and I d. as indicated in the Supplement:	isted bel al Box (R	ow had not been made, since
			e description, pages			
		_	drawings, sheets/figs			
			: sequence listing (specify):			
		$\neg$	y table(s) related to sequence listing (specify):			
· //	uem		es, some or all of those sheets may be marked "super			

### INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/JP2005/011606

Box No. V Reasoned statement under Article 35(2) with regard to novelty, citations and explanations supporting such statement			ticle 35(2) with regard to novelty, inventive step or porting such statement	industrial applicability;
1.	Statement			
	Novelty (N)	Claims	1-14	YES
		Claims		NO NO
	Inventive step	(IS) Claims	1-14	YES
		Claims		NO
	Industrial appl	licability (IA) Claims	1-14	YES
		Claims		NO NO
		Claims		NO NO

- 2. Citations and explanations (Rule 70.7)
  - Document 1: JP 2004-214576 A (Nippon Telegraph and Telephone Corporation), 29 July 2004, claim 8, paragraphs [0038] to [0066] (Family: none)
  - Document 2: JP 2003-86602 A (Nippon Telegraph and Telephone Corporation), 20 March 2003, paragraphs [0015] to [0020] (Family: none)

Document 1 cited in the international search report does not set forth an invention of a heterojunction bipolar transistor comprising "a compound semiconductor containing indium, aluminium and phosphorous", and document 2 cited in the international search report does not set forth an invention of a heterojunction bipolar transistor "containing at least gallium, arsenic and antimony as constituent elements of the compound semiconductor which forms the base layer, and containing at least indium, aluminum and phosphorous as constituent elements of the compound semiconductor which forms the emitter layer", therefore the invention set forth in claims 1 to 14 is not disclosed in any of the documents cited in the international search report, and would not be obvious to a person skilled in the art.

### INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No. PCT/JP2005/011606

Box No. VI	Certain documents cited			
I. Certain pu	blished documents (Rule 70.10)			
	Application No. Patent No.	Publication date (day/month/year)	Filing date (day/month/year)	Priority date (valid claim) (day/month/year)
JР	2005-86135 A [E,X]	31.03.2005	11.09.2003	
JP	2004-214576 A	29.07.2004	09.01.2003	

2.	Non-written disclosures (Rule /0.9)		
	Mind of the Political Control of the Political		Date of written disclosure
1	Kind of non-written disclosure	Date of non-written disclosure	referring to non-written disclosure
l		(da <i>v/month/year</i> )	(day/month/year)